Monthly Supplement of
THE PENNY MAGAZINE
OF THE
Society for the Diffusion of Useful Knowledge.

540.] July 31 to August 31, 1840.

BRITISH AGRICULTURE.

AUGUST

(Agricultural Emblems of August.—From Illuminations in MS. Saxon Calendars in Brit. Mus.)

In warm and dry seasons it frequently happens that this is the hottest month of the year. Not, however, that the sun's rays continue to possess the same power that they did a month or six weeks ago; but when once the ground has become heated and parched, and the whole surrounding medium has attained a high temperature from a continuance of warm weather, a less degree of intensity under such circumstances is sufficient to make the state of the atmosphere oppressive to the feelings. The nights, however, particularly towards the latter part of the month, begin to lose their summer sultriness; while we often find the pastures have become so parched, and the foliage so dried and shrivelled, that a premature decay of nature seems rapidly approaching; so that by the end of the month the bloom of summer may be said to have departed from the land. But the autumnal rains may be expected soon to set in, when, should the state of the atmosphere be favourable to vegetation, the late parched meadows and pastures will again assume a freshness and lively green, almost equalling the appearance of spring; but the leafy groves and hedgerows never regain their original verdure and beauty, although the ripening fruit in the orchards and gardens presents a pleasing and an enticing aspect, an aspect which many persons, no doubt, greatly prefer to the lovely blossoms of promise of April and May.

Should the previous portion of the season have been a favourable one for vegetation, this month is the great maturer of the summer crops; for though some of the later ones, particularly in bleak and elevated situations, may, when the month closes, be still unfit for gathering in,—by this advanced period of the season the hopes or the fears of the husbandman begin to be proved and realised. The crops of hay, excepting in particular localities, and under extraordinary circumstances, will have been stowed away in the stack or the mow; and, taking the seasons in general, the corn-harvest will everywhere be drawing towards a conclusion, except in those late situations already alluded to. However, since climate, nature, and quality of the soil, situation, early or late sowing, and the character of the weather during the past months, must all be taken into the account in reference to early or late harvests; and since those are found differing so materially between one section of the country and another, it will consequently be the less surprising that the sickle may frequently be seen in operation by him who travels through the various and varying sections of this island, in all the four months of July, August, September, and October. Generally, however, it may be observed, unless the seasons should be peculiarly unfavourable, much of this very great difference we have noticed in the maturing of the corn-crops proceeds from bad

management, and ought not to be altogether attributed to the causes we have mentioned.

In many parts of the country we find an old custom still prevailing, and for which the farmers cannot plead any absolute necessity, we mean that of engaging in both haymaking and reaping at the same time. When this is the case, it is very evident that one or the other must be neglected; for where matters that demand such a general and constant attention are permitted to interfere and clash with each other, there will, as a natural consequence, be neglect or mismanagement somewhere. In most instances this practice will be found obtaining in those parts where but little corn comparatively was formerly cultivated, so that the corn-harvest could hardly be considered worthy of having any distinct and regular period set apart for it; and when circumstances have arisen which have induced the farmers to alter their system, and to effect a change in their agricultural products,—for some reason or another, or perhaps for no reason at all (for it is no uncommon thing to find persons belonging to this class of the community acting apparently without any reason whatever), they continue to cultivate their land in such a way as to render it doubtful whether the grain or the grass crops ought to take precedence at harvest-time. When but small patches of corn were cultivated in districts where the land was principally devoted to grass, it was customary for the haymakers to devote an hour or two in the mornings to reaping, not meddling with the hay until the dews of the previous night had been exhaled by the sun's influence; and they would return in the evening to bind up and shock the grain that had been cut in the morning. Even at the present day we find, upon many farms that are of what may be termed a mixed cultivation, this old and certainly very indifferent system of farming still prevailing, notwithstanding the endeavours that have been made to amend it.

As we remarked of July, respecting its being the principal month for haymaking, so we may remark of this month as regards the corn-harvest: and hence we will introduce into our present article the observations which we purpose making upon so interesting an agricultural subject; and we cannot commence them more appropriately than by inserting our old friend Tusser's excellent advice:—

> "Make sure of reapers, get harvest in hand,
> The corn that is ripe doth but shed as it stand;
> Be thankful to God for his benefits sent,
> And willing to save it with earnest intent."

Again—

> "Reap well, scatter not, gather clean what is shorn,
> Bind fast, shock apace, have an eye to thy corn;
> Load safe, carry home, follow time being fair,
> Cove just in the barn, it is out of despair."*

The scythe and the sickle are the only implements employed in reaping; but these, according to prevailing customs, and the views and opinions of practical agriculturists, are of various forms and patterns. The sickle, for instance, is sometimes but slightly curved; at other times long and very considerably bent, particularly the part adjoining the handle: and on other occasions we find sickles very short as well as crooked. The edge of this implement is indented or cut into teeth, something like a fine saw; but there is this difference, since on the upper or smooth surface (as the sickle is held in the reaper's right hand) the teeth come to a keen edge, but, owing to the indentations or teeth, the edge is so rough that it does not readily let go whatever it once embraces. But there is another species of sickle, usually called a hook, which has a broader blade than the toothed sickle, being without any teeth whatever. Hooks are never of a great length, for if they were, their weight would endanger the spraining of the wrist; they are by no means so generally used as the other sort of sickle. However, where the crops of winter grain are very stout and heavy, persons accustomed to use them can not only perform more work than with the toothed sickle, but execute it in a better manner. As regards the fitting up of the scythe, which is now commonly used for mowing grain, particularly oats and barley, and in many places the wheat-crops too where they are not heavy, there are several plans occasionally adopted. In every instance, however, the scythe is furnished with some sort of light frame-work, attached to the hinder part of the scythe and the lower part of the handle, for the purpose of laying the grain straight in the swath, and the ears all one way; so that where raking and binding are necessary, the sheaves may be formed as smoothly and compactly as if the corn had been cut with the hook or sickle. Sometimes the frame consists of three, four, or five 'fingers,' or narrow strips of wood, somewhat shorter than the scythe, and curving in a similar way, fastened together by small cross-pieces, and firmly secured to the blade of the scythe. The general name for an implement of this sort is a *cradle*. The fingers are not always equally long, nor of the same shape; but always intended to answer the same purpose. The *bow* is another of those appendages to the scythe; but it is better adapted for carrying the cut stalks to the swath than for placing them with their heads all in one direction. The name sufficiently explains the nature of this appendage; one end of a bent piece of flexible timber being fixed in a hole in the hind part of the scythe, and the other in a corresponding part of the handle. Occasionally the bow is covered with a piece of canvas or linen cloth, which has the effect of preventing the straggling ears that may have been cut off short from falling through among the stubble, and so becoming lost. Other inventions have been tried, but the cradle and the bow we now find generally adopted. There are also two different plans of mowing corn; the more general, however, is to proceed the same way as is customary with grass, the mower keeping the standing corn on his right hand; whereas we sometimes find the farmers adopting the plan of mowing up against the standing crop, particularly their wheat; but in this case it is necessary that a raker and binder should immediately follow the mower for the purpose of removing the swath; for until that is removed, another swath cannot be mown. With respect to barley, in most of the districts where this species of grain is chiefly grown it is neither bound into sheaves nor shocked, and hence there is no particular necessity for laying it all straight and regular in the swaths; for when it is sufficiently dry and withered, when the large drag-rake passes over the stubble, and no gleaning takes place, it is raked together and carted to the stack or mow. Should the weather be hot, and the awns or beard of the barley brittle, dry, and prickly, the carting and stacking of barley is considered among the most unpleasant operations that fall to the lot of the farm-labourer. Should the weather prove rainy, the barley-crop requires considerable care and attention after it has been cut; for without the swaths are frequently turned over, it is very apt to sprout and germinate, by which means it is rendered unfit for malting. In mowing oats, particularly the heavier and finer sorts, should they remain uncut a little too long, great care is necessary to prevent a considerable loss, since, under such circumstances, they shed very freely. In certain parts of the country where the soil is adapted for raising oats, the necessity for immediate reaping when once the crops have attained a certain ripeness is so pressing, that the farmers are often induced to submit to exceedingly high wages rather than run the risk of their crops being exposed to winds and storms; for were these to happen while the oats are ripe and standing uncut, the waste by shedding would be incalculable. In some of those districts we particularly have reference to, the practice of Sunday-hiring is yet in vogue.

* 'August's Husbandry.'

The reapers flock to those places from a distance, where they are hired by the week, and four or five shillings a day, with board and lodging, and sometimes six or seven shillings, is the rate of wages which the farmers often submit to. But if such wages appear exceedingly high, the labour is proportionably severe; for the reapers are called abroad as soon as the light is sufficient for them to perform their labour; nor do they quit the field till night is fast approaching, sixteen or seventeen hours being ordinarily employed in a day's labour. Breakfast is usually brought to the field; and unless the farm-house should happen to be at a convenient distance, dinner is brought out also; when the men are only allowed just sufficient time to eat their messes of victuals before the farmer's headman or foreman, whose place it is to lead the field, sets off again to his reaping, when the rest of the party are expected to follow. There is usually a barrel of ale taken to the field for the use of the reapers whenever they feel inclined to have a draught, or rather whenever they can spare time to slake their thirst; but unless a man is particularly expert with his sickle, he will hardly find time, during the hours of business, to pay a single visit to the beverage he so much stands in need of. A short explanation here appears necessary, for this is very unlike the practice which commonly prevails in the harvest-field. The lands or ridges are all exactly of the same size, so that each individual has precisely the same quantity of work to perform; and the master usually sees that the work is done properly. The leader of the field (who is invariably an excellent reaper) sets himself to work on the first ridge, the rest of the party falling in as it may happen, but each has his own ridge to reap, and the same amount of labour to perform. Such of them therefore as are competent to keep pace with the leader will find opportunities of occasionally quenching their thirst, or whenever the leader chooses to do so, and perhaps at other times; but as he no sooner gets to the end of one ridge than he returns and begins another, while he and the more expert reapers are refreshing themselves with a draught of ale, the less expert reapers are toiling to finish their task, and when they return to the place of beginning they find the leader already advancing with his new ridge, and without losing time by seeking a draught of beer, they find themselves already behindhand with their appointed day's labour. Thus it is that those who are the most dexterous at the business find time to enjoy whatever may have been provided for them; while those who from greater exertion stand more in need of that stimulating vigour which wholesome home-brewed is considered to impart, are the very individuals that have the fewest opportunities. Some of the western parts of Lancashire and Cumberland, bordering upon the Irish Sea, are among those districts where large quantities of the best oats are grown, and in Furness, which is of no great extent, scarcely a harvest passes without some of the reapers falling victims to this inhuman system of overworking.

When rye was pretty generally cultivated, it used to be among the first of the grain crops ready for the sickle; whereas at present the wheat crops, in many situations, are cut earliest, though in other places barley takes precedence. In those divisions of the country where most of the farms are purely arable, the population is often found inadequate to the task of performing the labour required in the harvest season; hence the farmers are in some degree dependent upon aid from a distance. This being the case, it is customary for many of the young men—small farmers' sons, labourers, and some few mechanics who may understand reaping—to repair to those parts from the dale districts and grazing countries, often travelling sixty or eighty miles to seek a few weeks' employment, returning home again after an absence of five or six weeks with a greater amount of wages than they probably could have earned in double the time in their own neighbourhoods. However, for the last twenty years or more, this custom has been decreasing in almost every part of the country, which, in a great measure, may be attributed to the introduction of steam; not that the reaping is performed by any curious steam-machinery, but in consequence of the easy steam-boat communication between this country and Ireland; so that at the present time there scarcely is a corner of the country that yields much corn, whither we do not find numbers of Irish labourers flocking at the season. Subsisting poorly and inexpensively in their own country, the English farmers find that they can maintain them in an inferior manner here, and consequently at a cheaper rate than they could our English labourers; and when once they have wandered into the interior of the country, they must either work or starve, so that the farmers find but little difficulty in arranging with them for a low rate of wages.

The great influx of labour from Ireland has, among other things, very much tended to prevent females taking the part they were formerly wont to do in many places in the labours of the harvest-field; for, although not perhaps in an equal degree to haymaking, the maid-servants, as well as the wives and daughters of the small farmers, were accustomed to assist in the field during the corn-harvest. But the occupation of women in the harvest-field is now gone; and when we happen to see them at all in the wheat-field, it is only after the shocks of corn have been carted away; for seldom until then are they now permitted to accompany their children to glean up a few scattered ears which may still remain upon the ground, and this is often not allowed until the large rake has been dragged over the stubble: there are, however, still a few districts where men and women indiscriminately attend every morning at some market-cross or other accustomed place, with their hooks or sickles, for the purpose of hiring for the day, and whither the farmers repair from the surrounding neighbourhood for the purpose of engaging as many as the extent and condition of their crops may seem to require. But this is an ancient and unprofitable mode of managing matters, for as eight o'clock is the usual hour of leaving the place of hiring, and the party perhaps having two or three miles to go to their labour—and as they make a point of quitting work precisely at five in the afternoon—it is evident that a great deal of time is uselessly lost; so that the farmers have to abridge the rate of wages they otherwise might afford to give, and hence the loss ultimately falls upon the labourer. A few of these farmers still allow the children to accompany their mothers, and glean after them among the sheaves; but the temptation to drop ears intentionally to be picked up by the gleaners is so great, that the custom is now but little tolerated.

Where it is the custom to let out the reaping by the acre, as is now the case in several parts of the country—not to strangers, however, but to parties connected with the neighbourhood where the work has to be performed—we still frequently find the women assisting their husbands both in the reaping and the binding. Tusser, in his advice upon 'Harvesting Matters,' recommends letting out the reaping 'by great,' rather than hiring people by the day—

> "To let out thy harvest, by great, or by day,
> Let this by experience lead thee the way:
> By day will deceive thee, with lingering it out;
> By great will dispatch, and put all out of doubt."

When the season of the year is considered in which the reaping is generally performed, the weather frequently being hot and sultry, and also the posture in which the reaper's body is almost constantly placed, the back being bent to a horizontal position, when closely followed during a long day, it is as severe labour as almost ever falls to the lot of the husbandman. Hence it is that the custom generally prevails of providing the reapers with beer, of a good or middling quality, where it is not usual to sup-

ply any at other seasons. Even with many of those who take reaping by 'the great,' and who are not themselves in a condition to brew their harvest-drink, it usually is part of the agreement that the labourer is to receive so much money per acre, with a stipulated allowance of malt liquor or cider. Where the grain is all standing and straight, and not a heavy crop, a first-rate reaper will cut half an acre per day; but it is accounted tolerably good work for a man to cut, bind, and shock one-third of an acre for a day's work. But a good mower will cut two acres and a half or three acres of a middling crop of oats or barley; but of course he is not expected to either rake or bind it, two other persons being employed to complete these operations.

In seasons when the weather proves favourable, there is not much trouble in getting the grain-crops ready for the stack after they have been cut; for unless the straw should not be quite ripe, or there should happen to be much weeds or grass amongst it, but a short period is required before it is in a condition to be stacked; but in a wet harvest, wheat and barley in particular are apt to sustain serious injuries; for when the rains are accompanied by a pretty high degree of temperature, in a very few days the grain begins to germinate and grow, whereby its quality becomes materially deteriorated, for sprouted barley is entirely unfit for malt; while sprouted wheat, commonly called unsound, is not at all fit for bread,—indeed, unless it be mixed with grain of a superior quality, it is impossible to manufacture it into the ordinary wheaten loaf.

A managing and tidy practical farmer may commonly be known by the neatness and symmetry of his corn-stacks after they are thatched, and the general order and cleanliness of his barn-yard. Among Tusser's notices of good harvest points is that of 'goving,' or making a mow—

> "Gove just in the barn, it is out of despair."*

As there are different modes of making or curing hay in different parts of the country, so are there various plans adopted in managing crops of corn after they are cut or reaped. In some places we find the farmers adopting different sorts of treatment towards the different kinds of grain, and elsewhere we find the different kinds of grain all treated in precisely the same way. For instance—wheat is usually reaped, bound, and set up in shock or stook on the same day, provided it has been shorn tolerably dry; and in a few days or a week afterwards, provided it has been pretty free from weeds, and fully ripe when cut, and the weather tolerably favourable, it will be ready to be carted home and stacked. Whereas the same farmers will mow their barley, but neither bind nor shock it; but when it is sufficiently dry, will cart it to the mow or stack in a similar manner to hay. As for crops of oats, we sometimes find them treated the same way as wheat, and sometimes after the barley fashion.

> "The mowing of barley, if barley do stand,
> Is cheapest and best for to rid out of hand;
> Some mow it, and rake it, and set it on cocks,
> Some mow it, and bind it, and set it on shocks."*

Where but small quantities of grain are grown, it is customary to use only the sickle, and to shock the different sorts in precisely the same manner. Again, in some places the farmers cut the straw near the ground at the time of reaping; but in most of the best districts for growing wheat, where the straw is usually tall and stout, it is the custom to reap it pretty high, an advantage to the reaper and the thresher afterwards, the sheaves being lighter and better to handle; and the stubble, or haulm, is afterwards mown and raked together at some leisure period, and carted to a convenient place, where it may be used in littering the farm-stock, or converted into manure in some other way. Leaving much stubble on the ground is a decided sign of bad management; for after being exposed for a considerable time to the action of the atmosphere, it loses the greater portion of those qualities it ought to possess in order to improve future crops.

In speaking of the ploughman's feasts and holidays in a previous article, we had occasion to refer to the harvest-home, as being one of the few remaining occasions that annually return to gladden the hearts of those who have toiled through the long and varied year, busied with the duties and cares of the husbandman—some of them severe and laborious; and we there remarked that in many parts of the country this is now the only occurrence when the farm-labourers are regaled in the custom of olden times during the four seasons, by those who usually employ them.

> "Once ended thy harvest, let none be beguiled,
> Please such as did help thee—man, woman, and child;
> Thus doing, with alway, such help as they can,
> Thou winnest the praise of the labouring man."*

But at the harvest-home supper, to which all are invited who in any way may have assisted in securing the crops, besides the abundance of boiled and roasted, and plenty of merry brown beer, with the more insidious punch-bowl on many occasions, there is generally the village Orpheus with his rustic violin, ready to strike up some jocund air, when the whole party join in the rural country-dance; and thus, once a-year, amidst eating, drinking, dancing, and merry-making, the hardships and toils attendant on a life of labour, as well as the difference of rank and station, are for a time laid aside, and apparently forgotten.

During the time that the corn-harvest is progressing, for a short period nearly every other sort of farm labour is laid aside; but should the weather prove unsettled and changeable, the late-planted potato-crops, and the turnip-crops generally, demand the husbandman's attention; and the last ploughing and hand-hoeing is commonly bestowed upon them not later than during the present month. But in the grazing and grass districts, during the haymaking season, which often extends into August, the farmers frequently experience a difficulty in finding employment for their hired people; indeed it is no uncommon thing to see them with literally nothing to do.

To such an extent has the consumption of corn increased in this country within the last century, that notwithstanding the numerous and great improvements that have been introduced into our agricultural system, in addition to the breaking-up of thousands of acres of ground that had never before been stirred, yet the increase of our population has gone beyond the increased growth of corn so very far, that we have had of late years to import annually large quantities of corn from foreign countries, whereas we used to be regular exporters of it ourselves; and if we may be permitted to draw conclusions from the past, although there still remain vast tracts of land in this kingdom in an unproductive state, it scarcely seems probable that the produce of grain will ever again exceed the home consumption. It may be true that the great increase of population has necessarily called for an increase of various other farm productions, such as cannot be conveniently imported, particularly animal food; hence there is an almost insuperable objection against subjecting a greater number of acres to the plough than is at present in an arable state.

This fact may lead us to compare the nature of present crops with those that were formerly cultivated, not generally, perhaps, but to some considerable extent in particular parts of the country, several of which have been nearly, if not entirely, superseded by such crops as are better suited to the soil, or that may now be turned to a more profitable account. Among the crops that were formerly cultivated in England, but which have for many

* 'August's Husbandry.'

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years past wholly or nearly ceased being so, we will mention madder, saffron, weld, woad, buckwheat (which has been spoken of in a previous article), and a few others. We do not intend to devote much space to our remarks on the cultivation, &c. of any of these crops; but without including them in our compendium of British agriculture, it might appear to be incomplete.

Madder, which is a plant of Eastern origin, and not indigenous to this or any of the adjacent continental states, became an interesting subject about the middle of the last century with many of our leading agriculturists; but as it was only cultivated to be used in dyeing, there was little likelihood of its becoming a generally cultivated crop: but the raising of madder-crops, like some others that require a great deal of labour and attention, and a peculiar soil and management, is the better adapted to those countries where labour is cheap, and where the soil and climate are more congenial to its growth. When madder is cultivated, it is mostly for the sake of its roots, which are used in dyeing, though the stalks have sometimes been given to cattle; and when eaten by milch-cows, the milk they yield becomes of a deeper orange-colour, and the butter exceedingly yellow, but at the same time well tasted. On some parts of the Continent they cut the stalks and dry them for hay; but as it is desirable that the seed (of which there is but very little) should be permitted to ripen, the summer is far advanced before the plants are fit for cutting. But one of the great objections with the generality of farmers to cultivating crops of this sort, is that of their requiring so long a period, nearly three years, to bring the roots to a fit condition to be taken out of the ground, dried, and sold to the dyers; for where three years' rents have to be paid, as well as the amount of wages for so long a period for all the labour and attendance the crop necessarily requires, the value of the crop must be great indeed to induce parties to speculate to any considerable extent in its cultivation. One of the chief reasons, no doubt, for its becoming less cultivated than it formerly was, is the great increase of our commercial intercourse with foreign nations, and hence the opportunity of importing various other ingredients made use of in dyeing; and although none of them may have altogether superseded the use of madder, yet they have tended to lessen the demand. A writer in the 'Farming Dictionary' makes use of the following remarks:—"For the madder to succeed well, there should be a great depth of good soil, and it should be turned up very deep with the plough, or, what is much to be preferred, with a spade. Madder is very fond of moisture, and therefore thrives best on a good loam with a clay bottom. To bring it to a state of perfection, it requires a great deal of nourishment; and yet it does not impoverish the land, which is evident from the circumstance that when the madder has been dug up, the ground in general is in excellent condition to bear a good crop of wheat. The root, which is one of the best ingredients that can be used for dyeing wools and stuffs, imparts to them a red colour; not very bright, it is true, but one which resists, without alteration, the influence of the air, the heat of the sun, and the effects of those ingredients made use of to test colours. It contributes also towards making other fixed colours lasting; and a method has been discovered of giving to cotton a very pleasing and lasting colour with it. But all parts of the root do not yield this valuable red; for the dye of some parts is fainter, and soon fades; while other parts are worth nothing at all."

After the roots, which strike deep into the ground, are taken up, washed, cleaned, and dried in kilns built for that purpose, they are then ground into a powder, in order that the whole of the dye may be readily extracted. But the green roots will yield a considerable quantity of dye if they are bruised immediately on their being taken out of the ground; so that when persons engaged in dyeing grow their own madder, much labour and delay are sometimes avoided by using it in a green and undried state. In Holland and France considerable quantities of madder continue to be cultivated; but very little at present in any of the southern counties of England, where many of the farmers formerly turned their attention to its cultivation.

Though the cultivation of saffron never extended beyond certain local districts, at least to any great extent, at one period the demand for it was such, that the farmers of a few districts devoted much of their time and attention to its culture. About a century ago, nearly the whole of the country around Saffron Walden in Essex, and thence northwards into Cambridgeshire, was devoted to the cultivation of saffron; but at the present day, the quantity grown in either of those counties is but very trifling indeed. Hares are remarkably fond of the young plants, so that if considerable care is not paid to keeping them out of saffron-grounds, the crops are in danger of receiving much damage. Saffron crops are usually allowed to remain in the ground three years, at the expiration of which the roots are carefully taken up and planted in some new situation.

Weld, or dyer's weed, is a plant that grows wild in many parts of the country. We also sometimes find it cultivated; but it never has been so to any great extent in this country, and at present we may travel through many entire counties without ever falling in with a single acre of it. This also is one of those plants which was formerly used pretty extensively in dyeing; but which, through our extended commercial intercourse with various parts of the world—and hence the means we enjoy of procuring substitutes of a superior quality and at a cheaper rate—has fallen greatly into disuse amongst us. When cultivated in a good soil, it grows to the height of three feet, and is then considered as yielding a superior dye to that which grows wild. The best time for sowing it is in the latter part of July or the beginning of the present month, and it remains in the ground until it has done blossoming the following summer, when it is pulled up by the roots, dried, and sold to the dyers. The whole of the plant is used in dyeing; but the berries, which contain the seed, are understood as yielding the greatest quantity of dye. The blossoms are yellow, and the whole plant is used in dyeing that colour. In France, where it is still cultivated pretty extensively, they sow it among beans or other crops; and as soon as these are harvested, they immediately set about weeding the ground, so as to leave the young plants of weld in full possession of the soil. Mr. Miller says:—"The beginning or middle of August is the proper season for sowing weld in this country. The only care which it requires while growing is to keep it clear of weeds that might choke it, or at least weaken its growth."

Woad is the common name of another of those plants formerly used somewhat extensively in dyeing, and, on that account, cultivated in some parts of this country, for then it was considered an almost essential ingredient in producing the various shades of blue; but the introduction of indigo has nearly superseded the uses of this (once) valuable plant. The leaves of this plant are used in dyeing after they have undergone the process of bruising or grinding, and are then formed into cakes and dried, having first been reduced to the consistency of a paste, so that they may be easily moulded. Upon a rich soil, and in favourable seasons, which should be neither cold nor yet dry, woad commonly yields two crops; and in the more genial climate of southern Europe, sometimes three or four. An acre of land well husbanded will yield a ton of woad, or something more; but the last crop is very inferior in quality to the first one, and ought not to be mixed with it. When it is intended to bear seed, the leaves of the plants should not be closely stripped off; but one crop, or gathering of the leaves, may be had even from those plants that are intended to bear seed.

Before the sprit of commercial enterprise had extended our trading transactions to almost every part of the globe, it was considered a matter worthy the attention of the farming interest to devote a portion of their farms, where the soil and situation appeared favourable, to the cultivation of those articles our home manufacture might require; and according to the extent of business then executed, from an imperfect acquaintance with their chemical properties, there is little doubt but a far greater quantity of dyeing ingredients was made use of than at present is the case. In those days it was customary for most families to spin and manufacture a portion of their own clothing, so that every family was in the habit of using more or less of dye-stuffs. The dye-woods and other materials used in dyeing are mostly imported from countries where they can be procured cheap; and it may be remarked that hot climates commonly yield those ingredients which impart the richest and deepest dyes.

In many parts of the country peas and beans are cultivated to so great an extent, that with the farmers these crops are considered bnt little inferior to any other in point of importance; and among the regular systems and rotations of crops, they occupy as prominent a place as almost any other. The crops of peas are early ready for being gathered in; but the bean crops are commonly the latest we find abroad in the harvest-field.

> "No turning of peason till carriage ye make,
> Nor turn it no more than ye mind for to take
> Lest beaten with showers, so turned to dry,
> By turning and tossing, they shed as they lie."*

When the crop of peas is suffered to become very ripe on the ground before it is cut with the scythe or the sickle, the peas are very apt to shed if exposed to either rain or dews; but unless the crop is a very light one, they have either to be collected into heaps some time before they are carted home, so that the straw should become thoroughly withered, or else more than a single turning will be found necessary.

> "Stack pease upon hovell abroad in the yard,
> To cover it quickly let owner regard;
> Lest dove and the cadow there finding a smack,
> With ill stormy weather do perish thy stack."*

It is somewhat singular that the old and curious custom here referred to of stacking peas upon some "hovell," that is, upon some hog-pen, or other low and mean outbuilding, is still practised in many places, without, in many instances, the parties thus adopting it being able to assign any particular reason for their doing so, further than its being an old and common custom. Where but a small quantity is cultivated, we have frequently seen them stacked in some old forked tree, when such a one happened to be in the vicinity of the farm-yard. There can be no doubt but peas ought to be kept dry after they are stacked, and consequently an airy situation is decidedly the best; but the principal reason for placing them in such peculiar situations seems to be a desire to protect them against the depredations of hogs, poultry, &c., which would not be the case were they stacked like grain; for when the upper part is well secured with thatch, by their being placed in an elevated position, there is not much chance of any serious damage happening to them in the way just mentioned. But with regard to nearly all sorts of crops that have to be subjected to the flail, it is invariably a consideration that they be not difficult to thrash. Hence some crops besides peas, when placed in situations where the straw 'gives,' or becomes soft and damp, require a great deal more labour in separating the grain from the straw. Thus, for instance, should barley be cut rather early, and stacked before it be thoroughly dry, though it may have had but little of either rain or dew upon it; yet should it be thrashed out during damp or rainy weather, it will be difficult to get the straw clean, or the awns or beards separated from the grains of corn. When farmers were more slovenly and careless in the cultivation of the corn crops, and the various kinds of weeds were commonly abounding in the corn-field a great deal more than we find them at present, the grass and weeds usually found mixed with the straw in the sheaves had the effect of imparting a moisture or mouldiness to the crops, so as to render the thrashing a more laborious operation than it commonly is at present.

But as regards both peas and beans, there is no doubt but they are improved by a moderate heating in the mow, since it has the effect of hardening them, and rendering them in a better condition for the market: but in all crops care must be taken that they do not become too much heated, that is, mow-burned. Crops of beans and peas are generally considered a sign of good farming, but they require different sorts of soil in order to yield productive crops. Beans are mostly cultivated upon stiff clayey soils; while loamy and even light lands will produce tolerable crops of peas. It therefore happens that in those districts the most celebrated for turnips, we find but few beans cultivated, from the two crops requiring very different qualities of soil to thrive upon. Beans are usually allowed to stand until both the stalks and pods become black. They are then cut—sometimes with a scythe, but more frequently with a sickle, tied up in small bundles, which are placed upright and singly; and as the straw is of no value, and the beans themselves not easily injured, they are suffered to remain until two or three dry days happen in succession, when they are carted to the homestead, and stacked.

At one period it had become very much the fashion to sow or plant turnips or cabbages with crops of beans, but notwithstanding this plan was often found very advantageous to the farmer, it has now, except in a few local districts, been pretty much laid aside. The plan usually adopted was this:—two rows of beans were sown, either drilled or ploughed under, at fifteen or eighteen inches apart, leaving a space of three feet or three feet and a half between these two rows and the next two. If cabbages were planted in the intermediate spaces, one row would be sufficient to fill it; but if turnips were preferred to fill up these spaces, then two rows might be introduced. Since beans were not considered a certain and never-failing crop, this plan undoubtedly gave the parties two strings to their bow; for if the beans did not succeed or bear well, which, however, they were more likely to do than when the whole space was occupied with them, then there were the turnips or cabbages, which but seldom failed. Land has frequently been known to produce from two to three quarters of beans per acre when planted in this way, and considerably over half a crop of turnips or cabbages; making together a more valuable crop than a full crop of either the one or the other would have yielded. It may be true that a little more labour might be requisite, but it should ever be borne in mind that a very small additional quantity of any valuable crop will well repay the expense of a considerable amount of extra labour. This, though apparently so self-evident a matter among farmers, is by no means generally acted upon; a single example will be sufficient to elucidate the principle we have here laid down. Even now, while we are engaged in writing, the second field which our study looks out upon is at present occupied with wheat yellow for the sickle. We have had daily opportunities of observing its growth and progress, as well as the labour and attention that have been bestowed upon it. Though this field it at present in the occupation of a large farmer, one who professes to manage his own affairs, and who has been brought up to the business of farming; yet a ramble across the foot-path which intersects the field in question will be sufficient to convince any one at all acquainted with agricultural affairs that there has been bad manage-

* Tusser's 'August's Husbandry.'

ment somewhere. The state of the matter is this—the seed was put in when the ground was in but bad condition last autumn; not that the soil is naturally poor, or that there had been any deficiency of manure, but evidently there had been a neglect in destroying several sorts of weeds that did not fail to show themselves early in spring. These weeds, as well as other annual ones that sprung up as the spring advanced, were permitted to encroach upon the young wheat-plants until late in May, when three or four labourers with their hoes were sent to set about weeding it. Although the whole field was full of weeds and filth, one section of it then appeared something worse than the other; and upon this part they first commenced. In our walks we remarked the progress of the party employed in weeding; and so full of various sorts of trash was the crop, that they did not complete but little over half an acre per day. In this way they progressed until they had cleaned about half the field; when the artificial grasses, becoming fit to cut, they were taken away to that or some other job of work, so that the opportunity passed away, and the remainder of the wheat-crop was suffered to fight its own battle with a host of weeds. The consequences are just what the owner or any other farmer might have expected: the half of the field which was weeded will yield twenty-six or twenty-eight bushels to the acre; the other, or unweeded part, will not yield over fourteen or sixteen. Now, here is a difference of twelve bushels per acre, which, at the present price of wheat, would be worth about 5*l.*; whereas the cost of weeding was not over 12*s.* the acre, leaving a clear difference (loss to the farmer) of 4*l.* 8*s.* per acre! It may be true that the cleaner portion may require a little more thrashing, &c., yet this is doubtful, for weeds in corn have the effect of imparting a moistness to the straw that renders it more difficult to separate the grain from the chaff; hence the twenty-eight bushels will probably be thrashed with as little labour as the sixteen. Then there is a material difference in the quantity and value of the straw in favour of the weeded part, so that at the period of harvesting the crop there is an absolute difference in point of value between the weeded and unweeded, of at least 4*l.* 10*s.* per acre. But the advantages of weeding do not end here, for to whatever purpose the field may be turned as regards the next year's crop, the unweeded portion will necessarily require a great deal of extra labour to bring it into a proper condition; or if that is not bestowed upon it, the crop is sure to prove another failure.

We have upon more than one occasion spoken of the usefulness of *recorded* observations; and now, in the midst of harvest, we will avail ourselves of a few remarks, from a recent number of the 'Quarterly Journal of the Statistical Society,' upon the great importance of accurate returns of the corn produce of the land, and of the consumption of that produce by its inhabitants. The returns now made from the different corn-markets, in order to form the average prices regulating the importation duty on foreign corn, are faulty and incomplete. The writer of the article from which we are about to quote, sketches the machinery for the collection of the desired information; but into this part of the subject we shall not enter, as the necessity of the measure itself has first to be established.

"The importance of accurately knowing the provision made for the sustenance of the people is surely not less than that of knowing the yearly produce of various articles of commerce, which are employed as accessories in manufacturing processes. The condition of the crop of indigo in Bengal is accurately communicated to the merchants in London at the earliest moment when it can be known; and the information thus given has, through its influence upon the market-price, an immediate effect in checking or promoting consumption. The like result is known to attend upon the collection of information concerning the growth of hops in this country, the extent of land devoted to the cultivation of that article being known through the records of the Excise Office, the department which is entrusted with the collection of the hop-duty.

"It is now well known that the harvest of 1837 was deficient to so great a degree, that before the produce of 1838 was secured, the great superabundance of the two preceding harvests was all consumed, and the stock of grain throughout the kingdom was more nearly exhausted than we have known it to be at any period in modern times; so that if we could not have had recourse to foreign wheat then warehoused in our ports, we must have suffered most severely before the produce of 1838 could have been brought to market. So completely, however, was the public misinformed upon the subject, that, instead of a reasonable advance in price, sufficient to check consumption, which, as regards the most costly grain, wheat, had, it is well known, been long going on with unwonted profusion, the markets fell progressively during the months of August, September, and October, 1837, from 60*s.* 1*d.* to 51*s.* per quarter; and it was not until the middle of the following May that the average was again as high as it had been just before the harvest of 1837. By the third week in August the weekly average price had advanced beyond the rate at which foreign wheat is admitted on payment of the nominal duty of 1*s.* per quarter. It would not be possible to calculate with any tolerable accuracy the loss in money which this country has sustained through the want of information thus shown with regard to only one year's operations; but we can have no hesitation in believing that its amount must have been at least sufficient, if employed at interest, to provide in perpetuity for every expense that could accompany the most completely organised machinery for collecting agricultural statistics throughout the United Kingdom.

"The natural, the necessary tendency of any systematic and comprehensive inquiry, such as might be made by government agents acting under legislative sanction, would be to place the nation, as far as possible, beyond the probability of scarcity. It is well known, by everybody who has made any extensive inquiries concerning the state of agriculture as a science in various parts of the kingdom, that the advances made in some counties have not been hitherto followed in others; and it has been stated, in illustration of this fact, that, if all England were as well cultivated as the counties of Northumberland and Lincoln, it would produce more than double the quantity that is now obtained. To what can this discrepancy be owing, unless it be to the want of information, such as the public agents would collect in each county, and which could not fail to interest deeply every farmer throughout the whole extent of the kingdom? If the cultivators of land where agricultural knowledge is the least advanced could be brought to know, upon evidence that would not admit of doubt, that the farmer of Northumberland or Lincolnshire procured, from land of fertility not superior to his own, larger and more profitable crops than he is in the habit of raising, is it likely that he would be contented with his inferiority? The farmers of England have often been accused of an undue preference for the plans and processes employed by their ancestors, and their pertinacity in this respect has been contrasted with the rapidity that accompanies the march of improvement in mechanical and manufacturing processes. The reason for this difference is obvious. Manufacturers, residing in towns, are brought necessarily and constantly into collision; new inventions are continually brought under their notice, so that their results can be tested and judged with the greatest accuracy. Practical agriculturists, on the contrary, live apart; they come together but rarely, and have not that degree of acquaintanceship, the one with the other, which leads them, even when they meet, to the

interchange of professional experience. If the result of a successful experiment should at any time reach their ears, they cannot be certain that all the circumstances connected with its prosecution have been faithfully detailed, or that the advantages ascribed to a new method may not be the consequence of accidental causes, such as a propitious season, for instance. Men are generally prone to doubt everything that is not presented to their own observation, and this is especially the case with regard to improvements, which imply the mental superiority of others over ourselves. The manufacturer, on the contrary, sees for himself; he is not called upon to take anything upon trust; he can weigh and judge with the minutest accuracy all the circumstances of each case; and what he sees can owe no part of its success to other than human agency; what another has once done, he may always successfully imitate. The tendency of information, such as would be procured by the agency already described, would be in a great degree to remove the disadvantage in this respect under which the farmer now suffers. Results placed before him upon such unquestionable authority, resting not upon a single experiment only, but upon the practice of hundreds of men placed in the same circumstances as himself, must be received by him as undoubted facts, and he must be driven to the adoption of whatever might come thus recommended, with an alacrity equal to that which we see exhibited by the manufacturer.

"It is to be feared that the time is yet distant in which various classes of the same community will be willing to make the apparent sacrifice, each one of its own fancied advantages, on the altar of the general good, with the conviction that the share each must obtain of that good will prove an ample compensation for any peculiar benefit that may be relinquished. The contrary principle seems at present to be held with the greatest tenacity. It is besides feared that, if the public should acquire knowledge of any such peculiar advantages, those who possess them would be exposed to have them invaded. The agricultural is, in this country, what is called a *protected* interest; our cultivators, consequently, appear desirous of excluding inquiries which might have the effect of weakening their claim to the continuance of that protection. This fear is altogether chimerical. In Belgium, where the utmost publicity is given to every circumstance connected with the agriculture of the country, it has never been pretended that any advantage has been taken of that publicity; and if this can be truly said of Belgium, where the members of the legislative chambers have not by any means so great or so direct an interest in the landed property of the kingdom as is possessed by the members of our two houses of parliament, there cannot surely be any reason to dread lest injury should be thus occasioned in England.

"The information, which it appears to be so desirable to obtain with reference to the whole kingdom, is already easily procurable with regard to each individual farm by any person who has a sufficient interest to incite him to the task. The landlord, who is interested in extracting a due proportion of the produce of a farm under the name of rent, cannot find much difficulty in correctly estimating that produce. A similar facility attends the operations both of the tithe-proctor and of the parochial tax-gatherer. The knowledge is, in fact, already procurable by every one who can turn it to the disadvantage of the farmer; all that is wanted is to extend the information, so that the farmer himself may be placed in a condition to profit from its possession."

MONTHLY CALENDAR.—SEPTEMBER—NINTH MONTH.

Day of the Month and Week.	Day of the Year.	Sundays and Remarkable Days.	Sun rises.	Eq. Time. Clock aft. Sun.	Sun sets.	Moon's Age.	Moon rises.	Moon sets.
			h. m.	m. s.	h. m.		h. m.	h. m.
1 Tu	245	Partridge shooting beg.	5 14	0 14	6 44	5·2	11m42	8a 2
2 W	246	. . .	5 16	0 33	6 42	6·2	0a56	8 25
3 Th	247	. . .	5 17	0 52	6 40	☽	2 6	8 57
4 F	248	. . .	5 19	1 12	6 38	8·2	3 8	9 40
5 S	249	. . .	5 20	1 32	6 35	9·2	3 59	10 36
6 Su	250	12 *Sunday after Trinity.*	5 22	1 52	6 33	10·2	4 37	11 43
7 M	251	. . .	5 24	2 12	6 31	11·2	5 5	morn
8 Tu	252	. . .	5 25	2 32	6 29	12·2	5 25	0 57
9 W	253	. . .	5 27	2 53	6 26	13·2	5 42	2 14
10 Th	254	. . .	5 28	3 13	6 24	14·2	5 55	3 32
11 F	255	. . .	5 30	3 34	6 22	○	6 8	4 51
12 S	256	. . .	5 32	3 55	6 20	16·2	6 20	6 10
13 Su	257	13 *Sunday after Trinity.*	5 33	4 16	6 17	17·2	6 33	6 31
14 M	258	Salm. Fish. in Scot. ends	5 35	4 37	6 15	18·2	6 49	8 55
15 Tu	259	. . .	5 36	4 59	6 13	19·2	7 9	10 22
16 W	260	*Ember Week.*	5 38	5 20	6 10	20·2	7 38	11 51
17 Th	261	. . .	5 40	5 41	6 8	21·2	8 19	1a14
18 F	262	. . .	5 41	6 2	6 6	☾	9 17	2 26
19 S	263	. . .	5 43	6 23	6 3	23·2	10 32	3 21
20 Su	264	14 *Sunday after Trinity.*	5 44	6 44	6 1	24·2	11 56	3 59
21 M	265	*St. Matthew.*	5 46	7 5	5 59	25·2	morn.	4 26
22 Tu	266	Autumnal Quarter beg.	5 48	7 26	5 56	26·2	1 23	4 45
23 W	267	. . .	5 49	7 46	5 54	27·2	2 48	5 0
24 Th	268	. . .	5 51	8 7	5 52	28·2	●	5 13
25 F	269	. . .	5 53	8 27	5 50	●	5 29	5 24
26 S	270	. . .	5 54	8 48	5 47	0·7	6 47	5 36
27 Su	271	15 *Sunday after Trinity.*	5 56	9 8	5 45	1·7	8 4	5 50
28 M	272	Jewish Year 5601 begs.	5 57	9 27	5 43	2·7	9 21	6 6
29 Tu	273	*MICHAELMAS DAY*	5 59	9 47	5 40	3·7	10 37	6 27
30 W	274	. . .	6 1	10 6	5 38	4·7	11 49	6 56

Meteorological Averages.		Ins.
Barometer.		
Mean height		29·931
Highest	.	30·410
Lowest	.	29·410
Hygrometer.		°
Mean dew-point		52·3
Highest	.	66
Lowest	.	37
Mean dryness		5·5
Mean greatest do. of day		11·1
Greatest dryness		20
Thermometer.		
Mean temperature		57·8
Highest		76
Lowest		36
Radiation.		
Mean great. of Sun		32·7
Greatest power		54
Mean cold of terrest.		5·4
Greatest ditto		13
		Ins.
Mean qty. of rain		2·193
Mean of evap.		2·620

Table of the Winds.

	Days.	Dew-P.
N. .	2	45°
N.E. .	4	50
E. .	1	52
S.E. .	4	56
S. .	1	61
S.W. .	6	51
W. .	6	54
N.W. .	6	49·5

SUNDAY LESSONS.

Sep.		MORNING.				
6	12 af.	Trin. 2	Kings	10	Matt.	7
13	13	„	„	19	„	14
20	14	„	Jerem.	5	„	21
27	15	„	„	35	„	28

	EVENING.				
Sep. 6	2 Kings	18 ..	Rom.		7
13	„	23 ..	„		14
20	Jerem.	22 ..	1 Cor.		5
27	„	36 ..	„		12

THE MOON'S CHANGES.

First Quart. 3th day, 10h.38m. aft.
Full . . . 11th day, 7h.48m. aft.
Last Quart. 18th day, 5h.32m. aft.
New . . . 25th day, 6h 27m. aft.

Day of Mth.	Length of Day.	Day's decrease	Day break.	Twil. ends.	Sun's Semi-dl.
	h. m.	h. m.	h. m.	h. m.	
1	13 30	3 4	3 6	8 52	
6	13 11	3 23	3 17	8 37	15′ 53″
11	12 52	3 42	3 28	8 22	15 54
16	12 32	4 2	3 39	8 9	15 55
21	12 13	4 21	3 49	7 55	15 57
26	11 53	4 41	3 58	7 42	15 58
					15 59

*** The Office of the Society for the Diffusion of Useful Knowledge is at 59, Lincoln's Inn Fields.
LONDON: CHARLES KNIGHT & CO., 22, LUDGATE STREET.
Printed by WILLIAM CLOWES and SONS, Stamford Street.